

Chrom. locus	Description	ESTs	Study	Reference	Detected	Our Proposed Location
At1g09130.1	ATP-dependent Clp protease proteolytic subunit (ClpR3)	23	cpt	4	LC	cpt
At1g10760.1	starch excess 1 (SEX1)	21	cpt	4	LC	cpt
At1g15690.1	inorganic pyrophosphatase	180	cpt	4	gel	cpt
At1g20620.1	catalase 3	625	cpt/perox	4,5	LC	perox
At1g20630.1	catalase 1	29	cpt	4	LC	perox
At2g04030.1	putative heat shock protein 90	31	cpt	4	gel	cpt
At2g21170.1	putative triosephosphate isomerase	67	cpt	4	LC	cpt
At2g26080.1	glycine decarboxylase P protein	68	cpt	4	LC	mit
At2g28000.1	chaperonin 60	39	cpt	1	gel	cpt
At2g43750.1	cysteine synthase (cpACS1)	35	cpt	4	gel	cpt
At3g01280.1	putative porin	58	cpt	4	gel	mit
At3g08580.1	adenylate translocator	381	cpt	4	gel	mit
At3g13470.1	chaperonin 60 beta	6	cpt	4	LC	?
At3g13930.1	pyruvate dehydrogenase dihydrolipoamide acetyltransferase	17	cpt	4	LC	mit
At3g47520.1	NAD-dependent malate dehydrogenase	18	cpt	3	LC	?
At3g48870.1	ATP-dependent Clp protease ATP-binding subunit (ClpC2)	14	cpt	4	LC	cpt
At3g58610.1	ketol-acid reductoisomerase	111	cpt	4	LC	cpt
At4g17740.1	carboxyl-terminal processing protease	5	cpt	2	LC	?
At4g28390.1	ADP,ATP carrier protein	4	cpt	4	gel	mit
At4g33010.1	glycine decarboxylase P protein	178	cpt	4	LC	mit
At4g35090.1	catalase 2#	99	perox	5	LC	perox
At5g08690.1	ATP synthase beta subunit	66	cpt	4	gel	mit
At5g13490.1	adenosine nucleotide translocator	20	cpt	4	gel	mit
At5g15090.1	voltage-dependent anion-selective channel protein hsr2	40	cpt	4	gel	mit
At5g19760.1	mitochondrial 2-oxoglutarate/malate translocator	40	cpt	4	gel	mit
At5g39410.1	expressed protein	9	cpt	4	LC	?

At5g42650.1	Cytochrome P450 (allene oxide synthase)	19	cpt	3,4	LC	cpt
At5g50920.1	ATP-dependent Clp protease ATP-binding subunit (ClpC1)#	48	cpt	3,4	LC	cpt
At5g58270.1	ABC transporter family protein	7	cpt	4	gel	mit
At5g58330.1	NADP-dependent malate dehydrogenase	40	cpt	4	LC	cpt
At5g67500.1	porin-like protein	32	cpt	4	gel	mit

Supplementary Table 3. Proteins from the set of 416 that cross-match to proteins found in previous chloroplast and peroxisome proteomic publications. The AGI number, description and number of ESTs for each cross-match are shown along with details of the publication showing the cross-match, the method used in this paper for the identification (gel or LC), and our proposed location of the cross-matching proteins. Of the 31 proteins claimed in other organelle proteomics studies: 12 are probable mitochondrial contaminants in chloroplast preparations – these are well known mitochondrial proteins found abundant in 2D gels, 12 are probable chloroplast contaminants in mitochondria, 4 are unclearly located, 3 are probable peroxisomal contaminants in mitochondria and chloroplasts. # indicates that these proteins are also members of the paralog redundancy set outlined in Supplementary Table 2.

References:

1. **Peltier, J.B., Emanuelsson, O., Kalume, D.E., Ytterberg, J., Friso, G., Rudella, A., Liberles, D.A., Soderberg, L., Roepstorff, P., von Heijne, G., and van Wijk, K.J.** (2002). Central functions of the luminal and peripheral thylakoid proteome of Arabidopsis determined by experimentation and genome-wide prediction. *Plant Cell* **14**, 211-236.
2. **Schubert, M., Petersson, U.A., Haas, B.J., Funk, C., Schroder, W.P., and Kieselbach, T.** (2002). Proteome map of the chloroplast lumen of Arabidopsis thaliana. *J. Biol. Chem.* **277**, 8354-8365.
3. **Ferro, M., Salvi, D., Brugiare, S., Miras, S., Kowalski, S., Louwagie, M., Garin, J., Joyard, J., and Rolland, N.** (2003). Proteomics of the Chloroplast Envelope Membranes from Arabidopsis thaliana. *Mol. Cell. Proteomics* **2**, 325-345.
4. **Froehlich, J.E., Wilkerson, C.G., Ray, K., McAndrew, R.S., Osteryoung, K.W., Gage, D.A., and Phinney, B.S.** (2003). Proteomic study of the *Arabidopsis thaliana* chloroplastic envelope membrane utilizing alternatives to traditional two-dimensional electrophoresis. *Journal of Proteome Research* **2**, 413-425.
5. **Fukao, Y., Hayashi, M., and Nishimura, M.** (2002). Proteomic analysis of leaf peroxisomal proteins in greening cotyledons of Arabidopsis thaliana. *Plant Cell Physiol.* **43**, 689-696.